

Davide Leonessi

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Education

- July 2026 PGCE with QTS in Mathematics, King's College London
- 4-month placement at St George's RC School; taught a Year 10 class and a Year 7 class
 - Carried out research on Maths learning for students with English as an additional language
 - Designed a research project on the teaching of History of Maths for a Year 12 class
 - Received a scholarship and training from the Institute of Mathematics and its Applications
- June 2025 MA in Mathematics, Graduate Center, City University of New York
- Specialized in Logic, interested in the intersection between Set Theory and Game Theory
- September 2021 MSc in Mathematics and Foundations of Computer Science, University of Oxford
- Awarded a Distinction; final average mark of 81
 - Defended the dissertation "Transfinite game values in infinite games" under the supervision of Prof. Joel David Hamkins; received the mark of 88
 - Took courses on Game Theory, Topological Groups, Model Theory, and Axiomatic Set Theory
- June 2019 BA in Mathematics, St Hugh's College, University of Oxford

Experience

- September 2026 – now Teacher, 1729 Maths School, London
- I am joining the founding team of this new school focussed on teaching advanced Maths to selected Year 7 and Year 9 students
 - At Mill Hill School I will deliver enriching sessions for Sixth Form students
- Feb. – June 2026 Teacher Trainee, King's Maths School, London
- Taught Year 12 Core Maths, Year 13 Core Maths, and Year 12 Statistics
 - Introduced History of Maths in my teaching of infinite sums
 - Contributed to the school's co-curriculars; facilitated a student-led concert, run a fresh pasta making and cooking afternoon activity, facilitated intra-school Maths and Physics competitions
- Jan. – Feb. 2025 Visiting Student, Instituto de Matemática Pura e Aplicada, Rio de Janeiro, Brazil
- Took a graduate course on Combinatorics
- Aug. 2023 – Dec. 2024 Lecturer, Hunter College, New York
- Taught a course in Linear Algebra: responsible for syllabus, homework, and exam-setting
 - Taught 35-student classes in Fall 2023, Spring 2024, and Fall 2024 (2 sections)
- June – July 2023 Teaching Assistant, SUMaC Mathematics Camp, Stanford University
- Tutored 4 high school students taking a selective course on Algebraic Topology: marked their solutions to assigned problem sheets and met with them one-on-one daily
 - Led a group of 2 students through a research project on Braid Groups, and a group of 3 students through a project on Topological Data Analysis
 - Helped my research students to prepare a presentation of their findings for their 40 peers
- December 2020 Admissions Exam Marker, Mathematical Institute, University of Oxford
- Learned marking conventions for the MAT, the Maths test for undergraduate admissions
 - Cooperated with a team of graduate students to mark consistently 2000 scripts
- July – August 2019 Data Scientist, Imaflora, Piracicaba (São Paulo), Brazil
- Analysed a comprehensive data set of timber trade taken place in Brazil over a decade, which was recently released by the Brazilian government
 - Developed a tool in Python that recognizes potentially criminal productive behaviour of timber companies, using a Network Theory approach for the first time in this setting
 - Presented and discussed the approach at a workshop organized by the University of São Paulo, with academics and industry representatives

Experience (continued)

- June – Sept. 2017 Researcher, Mathematical Institute, University of Oxford
- Applied Network Theory to predict the industrial pollution of US cities
 - Analysed large data sets with Matlab; visualized complex networks with Gephi
 - Attended the multidisciplinary conference “Oxford Summer School in Economic Networks”
- July 2016 Visiting Student, IARU Program, Peking University, Beijing
- Received a bursary to attend a course on Cultural Psychology and an introduction to Mandarin
 - Submitted a research proposal at the end of the course and received grade A

Publications

- [4] Davide Leonessi. “Recapitulating the Basel Problem in Year 12: a history-as-a-tool approach to Euler’s proof” *To appear in BSRLM Proceedings*. <https://leonessi.org/2026/05/20/base1/>.
- [3] Joel David Hamkins and Davide Leonessi. “Infinite Hex is a draw” *Integers* **23** (2023), Paper no. G6. doi:10.5281/zenodo.10075842. <http://wp.me/pdrDew-2s>.
- [2] Joel David Hamkins and Davide Leonessi. “Transfinite game values in infinite draughts” *Integers* **22** (2022), Paper no. G5. <http://wp.me/pdrDew-1I>.
- [1] Davide Leonessi. “Transfinite game values in infinite games” (2021). MSc dissertation, Mathematics and Foundations of Computer Science, University of Oxford. arXiv:2111.01630, <http://wp.me/pdrDew-N>.

Talks

- June 2026 “Recapitulating the Basel Problem in Year 12: a history-as-a-tool approach to Euler’s proof,” New Researchers’ Day, British Society for Research into Learning Mathematics, King’s College London
- September 2023 “Infinite draughts: an unsolved open game,” Infinite-Games Workshop
- March 2023 “Strategy and determinacy in infinite Hex,” Logic Working Group, University of Torino
- February 2023 “Introduction to the theory of infinite games,” Student Logic Seminar, Graduate Center, City University of New York
- February 2023 “Strategy and determinacy in infinite Hex,” Set Theory Seminar, Graduate Center, City University of New York
- January 2023 “Strategy and Set Theory in the game of infinite Hex,” Discrete mathematics and logic: between mathematics and computer science, Centre International de Rencontres Mathématiques (CIRM), Luminy, France
- May 2022 “The games of infinite draughts and infinite Hex,” Junior Logic Seminar, University of Oxford
- June 2021 “Transfinite game values in infinite games,” Summer Graduate Student Meeting, London Mathematical Society

Academic service

Co-organizer of the Infinite-Games Workshop

Co-organizer of the Graduate Student Colloquium, CUNY Graduate Center

Skills and interests

Languages	Native speaker of Italian, advanced knowledge of Portuguese, basic level of French and Spanish
Programming	Experience with Python, Matlab, C, and Sage
Rowing	Taken part in inter-collegiate rowing regattas with the St Hugh's College Boat Club at Oxford
Trekking	Walked 900 km in Northern Spain along a Medieval route over 5 weeks
Journalism	Wrote a witty article a week for the student newspaper <i>The Swan</i> on College meals and events
Volunteering	Oxfam volunteer in local and national fundraising campaigns in Italy and the UK
Acting	Acted with King's College Drama Society, previously acted for 9 years in my home town
Traditional events	Volunteer for the historical re-enactment of the medieval Saracen Joust held in my home town

Honours and Prizes

June 2021	Best Graduate Student Talk Prize, London Mathematical Society Received for the presentation of my MSc dissertation research in front of PhD students and academics at the LMS Summer Graduate Student Meeting
September 2019	Bursary to attend "Prospects in Mathematics", London Mathematical Society Meeting for students interested in further education held at the University of Lancaster
May 2014	2 nd prize, Philosophical Debating Olympiads, Italian Philosophical Society Selected to join my high school team at the national final held in Faenza, Italy
September 2013	Bursary to attend course "Senior", Scuola Normale Superiore of Pisa Selected to attend an intensive course in preparation of mathematical competitions
September 2011	Mention in the National Registry of Excellence of the Italian Ministry of Education Received after winning a place at the international final of the International Championship of Mathematical and Logical Games in Paris. indire.it

Conferences attended

12 June 2026	Summer Day Conference, British Society for Research into Learning Mathematics, King's College London Facilitated conference running
29–31 May 2026	School in the History of Mathematics, Chapman University, Cetraro, Italy Received funding from the local organizers
7 March 2026	Research in Progress, British Society for the History of Mathematics, Oxford
11 October 2025	National Mathematics Teacher Conference, Complete Mathematics, London
17–21 June 2024	Young Set Theory Workshop, Erdős Center, Budapest Received funding from CUNY and the local organizers
5–9 June 2023	Logic Colloquium, University of Milan Received funding from the Association of Symbolic Logic and CUNY

Conferences attended (continued)

29 May – 3 June 2023	Young Set Theory Workshop, University of Münster Received funding from the Association of Symbolic Logic and the local organizers
23–26 May 2023	Mid-Atlantic Mathematical Logic Seminar, Rutgers University Received funding from CUNY
29 Aug. – 2 Sept. 2022	European Set Theory Conference, University of Torino Received funding from the National Science Foundation grant 2214692
6–11 June 2022	UltraMath, University of Pisa Received funding from the local organizers